

NISTTech

High-T_c Superconductor Contact Unit with Low Interface Resistivity

Abstract

A high-T_c superconductor contact unit having low interface resistivity is disclosed, as is a method for making the unit. An inert metal is deposited on the surface of the superconductor, which surface is preferably non-degraded, to form a unit with the surface of the superconductor, and where temperatures as high as 500°C to 700°C can be tolerated, the unit is oxygen annealed to establish a still lower surface resistivity between the surface of the high-T_c superconductor and the inert metal, including a low surface resistivity of about 10⁻¹⁰ Ω-cm² at high-T_c superconductor operating temperatures. The superconductor is a metal-oxide superconductor, and may be rare earth, thallium, or bismuth based.

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Related Items

- Article: Strain Has Major Effect on High-Temp Superconductors

References

- U.S. Patent # 5,179,071 issued 01-12-1993, expired 01/15/2011
- Docket: 88-041US

Status of Availability

This technology is available in the public domain.

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